STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

Mr. R. W. Neiser
Florida Power Corporation
3201-34th Street South
St. Petersburg, Florida 33733
_____/

DER File No. AC 01-204652
PSD-FL-181
Alachua County

Enclosed is Permit Number AC 01-204652 to construct a 43 MW cogeneration facility at the University of Florida's Central Heat Plant facility in Gainesville, Alachua County, Florida, issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on August 17, 1992 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.

Charlotte J. Hayes (Clerk) 8/17/92 (Date)

Copies furnished to:
A. Kutyna, NED
J. Harper, EPA
C. Shaver, NPS
K. Kosky, P.E.

Final Determination

Florida Power Corporation/University
of Florida Cogeneration Project
Alachua County, Florida

Permit No. AC 01-204652
PSD-FL-181

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

August 7, 1992

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a 43 megawatt cogeneration facility at the University of Florida Central Heat Plant in Gainesville, Alachua County, Florida, was distributed on June 30, 1992. The Notice of Intent to Issue was published in the Gainesville Sun on July 3, 1992. Copies of the evaluation were available for public inspection at the Department's Tallahassee and Jacksonville offices.

Comments were submitted by the applicant on July 29, 1992, requesting modification of Specific Conditions Nos. 3, 4, and 7. The Department made the following changes in response to those comments:

Specific Condition No. 3 - Specific limits for Boilers 4 and 5 were replaced with a total NO_x cap to provide operational flexibility in the event of gas curtailments.

Specific Condition No. 4 - The required operating rate during the compliance test was modified to reflect the maximum capacity achievable at a given ambient temperature.

Specific Condition No. 7 - Language was added to clarify that a revised BACT analysis is dependent on the facility meeting the emission limits.

The final action of the Department will be to issue construction permit AC 01-204652 (PSD-FL-181) as modified.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Florida Power Corporation
3201 - 34th Street South
St. Petersburg, FL 33733

Permit Number: AC 01-204652
PSD-FL-181
Expiration Date: December 31, 1994
County: Alachua
Latitude/Longitude: 29°38'23"N
82°20'55"W
Project: UF Cogeneration Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a 43 Megawatt cogeneration facility consisting of replacement of existing boiler Nos. 1, 2, and 3 with a GE LM-6000 combustion turbine in series with a duct burner at a designed flow of 325,200 ACFM, and operating existing boiler Nos. 4 and 5 as auxiliary units.

Particulate emissions shall be controlled by using clean fuels and good combustion practices. CO emissions shall be initially controlled by proper combustion techniques. NO_X emissions shall be initially controlled by steam injection. Future control requirements for CO and NOx will be established by a revised BACT determination if deemed necessary by the Department.

The facility is located at the existing Central Heat Plant on the campus of the University of Florida in Gainseville, Alachua County, Florida. The UTM coordinates are 369.4 km East and 3,279.3 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:
1. FPC letter dated 11-13-91.
2. FPC letter dated 11-25-91.
3. KBN letter dated 12-2-91.
4. DER incompleteness letter dated 12-31-91.
5. FPC letter dated 1-2-92.
6. EPA letter dated 1-8-92.
7. DER letter to EPA dated 1-16-92.

Attachments Cont'd

8. KBN letter dated 1-30-92.
9. FPC letter to EPA dated 2-6-92.
10. DER letter to EPA dated 2-12-92.
11. DER letter to EPA dated 2-14-92.
12. FPC response to incompleteness dated 3-5-92.
13. FWS letter to DER dated 4-2-92.
14. EPA letter to DER dated 4-8-92.
15. KBN letter to DER dated 4-8-92.
16. EPA letter to DER dated 6-16-92.
17. FPC letter to DER dated 6-19-92.
18. FPC letter to DER dated 7-29-92.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

GENERAL CONDITIONS:

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

GENERAL CONDITIONS:

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

(x) Determination of Best Available Control Technology (BACT)
(x) Determination of Prevention of Significant Deterioration (PSD)
(x) Compliance with New Source Performance Standards (NSPS)

GENERAL CONDITIONS:

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. Unless otherwise indicated, the construction and operation of the subject cogeneration facility shall be in accordance with the capacities and specifications stated in the application.

SPECIFIC CONDITIONS:

2. Emissions from this facility shall not exceed the limits listed below:

Pollutant	Source	Fuel	Basis of Limit	lbs/hr	tons/yr
NOx	Turbine	Gas	EBM*:25 ppmvd @ 15% O2	35.0	142.7
	Turbine	Oil	EBM*:42 ppmvd @ 15% O2	66.3	7.3
	D.Burner	Gas	EBM*:0.1 lb/MMBTU	18.7	24.6
SO2	Turbine	Oil	BACT:0.5% Sulfur Max.	-	-
	Boiler 4	Oil	BACT:0.5% Sulfur Max.	-	-
	Boiler 5	Oil	BACT:0.5% Sulfur Max.	-	-
VE	Turbine	Gas/Oil	Equivalent of mass EBM*	10%/20% opacity**	
	D.Burner	Gas	" " "	10% opacity	
	Boiler 4	Gas/Oil	" " "	10%/20% opacity**	
	Boiler 5	Gas/Oil	" " "	10%/20% opacity**	
CO	Turbine	Gas	BACT:42 ppmvd	38.8	158.0
	Turbine	Oil	EBA***:75 ppmvd	70.5	7.7
	D.Burner	Gas	BACT:0.15 lb/MMBTU****	28.1	36.9

*EBM: Established by manufacturer
**Except for one 6-minute period per hour of not more than 27% opacity
***EBA: Established by applicant
****BACT limit proposed by applicant in Table A-2 of application

3. Fuel consumption rates and hours of operation for the turbine and duct burner shall not exceed those listed below:

	Natural Gas			No. 2 Fuel Oil		
	M ft3/hr*	MM ft3/yr	hrs/yr*	M gal/hr*	M gal/yr	hrs/yr*
Turbine	367.9	2997.2**	8146.8**	2.9	635.1	219.0**
Duct Burner	197.7	519.5	2628.0	0	0	0

*Based on maximum firing rates. Units may run at lower rates for more hours within annual fuel limits.

**An additional 1.9 hours/yr operation on natural gas will be allowed for each 1.0 hour/yr that fuel oil is not burned (up to 219 x 1.9 hours/yr), in which case, the emission limits in Specific Condition No. 2 shall be adjusted accordingly.

SPECIFIC CONDITIONS:

Boilers Nos. 4 and 5, firing natural gas or No. 2 fuel oil, may be operated as necessary for backup, as long as total NO_x emissions from the four sources within the permitted facility do not exceed 194.3 tons NO_x per year. The permittee shall maintain the required fuel use records to demonstrate compliance with this condition and include the total NO_x emission calculation in each annual operating report.

4. Before this construction permit expires, the cogeneration facility and Central Heat Plant (Boilers 4 and 5) stacks shall be sampled or tested as applicable according to the emission limits in Specific Condition No. 2. Annual compliance tests shall be conducted each year thereafter. Compliance tests shall be run at 96% to 100% of the maximum capacity achievable for the average ambient temperature during the compliance tests. The turbine manufacturer's capacity vs. temperature (ambient) curve shall be included with the compliance test results. Tests shall be conducted using the following reference methods:

NO_x: EPA Method 20
SO_2: Fuel supplier's sulfur analysis
VE: EPA Method 9
CO: EPA Method 10

5. The DER Northeast District office shall be notified at least 30 days prior to the compliance tests. Compliance test results shall be submitted to the DER Northeast District office and the Bureau of Air Regulation office within 45 days after completion of the tests. Sampling facilities, methods, and reporting shall be in accordance with F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A.

6. A continuous operations monitoring system shall be installed, operated, and maintained in accordance with 40 CFR 60.334. The natural gas, fuel oil and steam injection flows to the cogeneration turbine along with the power output of the generator shall be metered and continuously recorded. The data shall be logged daily and maintained so that it can be provided to DER upon request.

7. The permittee shall have the option of including, in the initial construction, adequate modules and other provisions necessary for future installation of state-of-the-art catalytic abatement or equivalent CO and NOx control systems. Within 90 days of receipt of the initial compliance test results, the Department shall, if CO emission limits are not met, review the need for making a revised determination of Best Available Control Technology for CO.

SPECIFIC CONDITIONS:

If test results from the turbine and duct burner show that it is unlikely that NO_x limits can be met, a revised BACT determination for NO_x shall also be considered. The Department may revise the BACT determination to require installation of such technology if so indicated by the revised BACT cost/benefit analysis. If the permittee has elected not to provide for future addition of such technology in the initial construction and later applies for a permit modification to increase capacity, the retrofit costs associated with not making provisions for such technology (initially) shall not be considered by the Department in the retrofit cost analysis required for the future expansion.

8. Boilers Nos. 1, 2 and 3 shall permanently cease operation upon receipt of the operation permit for the cogeneration facility.

9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

10. An application for an operation permit must be submitted to the Northeast District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 17th day
of August, 1992

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner, Secretary

Revised
Best Available Control Technology (BACT) Determination
University of Florida Cogeneration Project
Alachua County

The applicant proposes to install a 43 MW cogeneration facility to replace existing boiler capacity at the University of Florida - Gainesville campus in Alachua County. The facility will consist of a General Electric LM-6000 Gas Turbine Generator exhausting through a duct-fired heat recovery steam generator which will produce steam for the University campus. The turbine and duct burner will be fired by natural gas with No. 2 fuel oil being used only as a backup fuel for the turbine.

A BACT determination is required for all regulated air pollutants emitted in amounts equal to or greater than the significant emission rates listed in Table 500-2 of Florida Administrative Code (F.A.C.) Rule 17-2.500.

The following table presents the estimated actual emissions in tons per year proposed by the applicant for NO_x, SO_2, PM/PM_{10}, VOC, and H_2SO_4. The Department accepts the applicant's proposed emissions for those pollutants, but will require a more stringent CO limit for the turbine during natural gas firing than proposed by the applicant (42 ppmvd vs. 75 ppmvd).

	Gas Turbine		Duct Burner	Total	Offsets	Increase	PSD
	NG	Oil	NG				
NO_x	142.7	7.3	24.6	174.6	134.9	39.7	40.0
SO_2	4.3	21.6	0.7	26.6	36.1	-9.5	40.0
PM/PM_{10}	10.2	1.1	2.5	13.8	3.4	10.4	25/15
CO	158.0	7.7	36.9	202.6	20.4	182.2	100.0
VOC	6.5	0.4	10.6	17.5	1.1	16.4	40.0
H_2SO_4	0.3	2.0	0.1	2.4	0.8	1.6	7.0

Emissions are based on firing natural gas in the turbine for 8,147 hours/yr at 348 MMBTU/hr and natural gas in the duct burner for 2,628 hours/yr at 187 MMBTU/hr. Oil firing in the turbine is based on 219 hours/yr at 382.6 MMBTU/hr.

Turbine performance under natural gas firing is based on NO_x emissions of 25 ppmvd (corrected to 15 percent O2). Performance on oil firing is based on NO_x emissions of 42 ppmvd (corrected to 15 percent O2). SO_2 emissions are based on 0.5 percent sulfur.

Date of Receipt of a Complete Application

March 6, 1992

BACT Determination Requested by Applicant

Control Technology: Combustion efficiency for cogeneration CO control.

Emission Limits: 75 ppmvd CO (natural gas or No. 2 oil - 0.5% Sulfur max.)
(No request made for Boilers 4 and 5)

BACT Determined by the Department

Control Technology: Combustion efficiency for cogeneration CO control.

Emission Limits:	Turbine - Natural gas firing:	42 ppmvd CO
	Turbine - No. 2 oil firing:	75 ppmvd CO
	Maximum % Sulfur - No. 2 oil:	0.5 % S
	Duct Burner - Natural gas:	0.15 lb CO/MMBTU
	Boilers 4 & 5: (Gas/Oil)	10%/20% Opacity

BACT Determination Procedure

In accordance with F.A.C. Chapter 17-2, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available control methods, systems and techniques. In addition, the regulations require that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other State.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

A review of EPA's BACT/LAER Clearinghouse indicates that catalytic oxidation is the most stringent control technique. An oxidation catalyst control system allows unburned CO to react with oxygen at the surface of a precious metal catalyst such as platinum. Combustion of CO starts at about 300°F and reaches near completion (above 90%) at temperatures above 600°F. Catalytic oxidation occurs at temperatures 50 percent lower than for thermal oxidation thus reducing the thermal energy required. The oxidation catalyst is typically located directly after the turbine or as an integral part of the steam generator. Catalyst size depends on the exhaust flow, temperature, and desired efficiency.

Catalytic oxidation for CO control has been employed in nonattainment areas and is considered to be LAER technology capable of reducing CO emissions to the 10 ppm range. Due to economics, applications of catalytic oxidation technology have thus far been limited to small cogeneration facilities burning natural gas. Oxidation catalysts have not been used on base-loaded fuel oil-fired turbines in simple cycle or combined cycle facilities since extended use of sulfur-containing fuel would result in increased corrosion. Also, trace metals in the fuel could poison catalysts during prolonged fuel oil firing.

Using the applicant's proposed CO emission level of 75 ppmvd, the total annualized cost of CO catalytic oxidation for this project is $508,156 with a cost effectiveness of about $1,970/ton of CO removed. The cost effectiveness is based on 87% efficiency (75 ppmvd to 10 ppmvd) and includes a heat rate penalty of 0.2% based on an energy loss of $50/MW associated with pressure drop across the catalyst. A review of previous BACT determinations indicates that $1,970/ton would not be prohibitive. However, the decision to require catalytic oxidation should be based on a cost/benefit analysis once compliance testing has been done. Therefore, the Department will propose initial BACT emission limits for CO consistent with recent BACT determinations for similar sources. These limits are to be revised, if necessary, upon evaluation of the compliance test data. The turbine limit proposed by the applicant for fuel oil operation (75 ppmvd) is more stringent than a recent BACT determination for similar sources (78 ppmvd).

Other Air Pollutants Not Subject to BACT Determination

The application indicates that emissions of other pollutants will not be subject to a BACT determination. The applicant narrowly escaped PSD review for NO_x by lowering firing rates, and since increased firing rates may be requested at some future date, the Department will require that retrofit costs associated with the applicant's decision not to make initial provisions for future installation of advanced catalytic control shall not be considered in any cost analysis required for any future requested increase in capacity.

Details of the Analysis May be Obtained by Contacting:

Preston Lewis, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

August 14 1992
Date

Approved by:

Carol M. Browner, Secretary
Dept. of Environmental Regulation

August 17 1992
Date

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

December 31, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. W. Neiser
Senior Vice President-Legal and Gov. Affairs
Florida Power Corporation
3201-34th Street South
St. Petersburg, Florida 33733

Dear Mr. Neiser:

Re: Permit Application AC 01-204652
UF Cogeneration Project

The subject application and permit fees for the UF cogeneration facility were received by this office on December 2, 1991, after a pre-application meeting on November 13 with FPC staff. About two weeks later FPC staff contacted us to inquire about the status of the application. They emphasized the urgency of the project. We indicated to them that our review had not been completed but that we hoped an incompleteness letter might be avoided. Several days later we discovered that PSD applicability for one of the major pollutants (NO_X) was determined incorrectly in the application. We notified your staff and consultants of this by phone on December 19. In order to complete the application, the following additional information and revisions are required:

1. The AP-42 NO_X emission factor for fully loaded natural gas-fired boilers over 100 MMBtu/hr is 550 lbs. NO_X/MM ft^3 of fuel fired. For loads less than 100%, the emission factor is reduced according to AP-42, Figure 1.4-1. The 100% factor was used to calculate offset credits of 195.1 tons/yr of NO_X emissions, thus arriving at a net NO_X increase of 38.8 tons/yr. This level of net emissions (less than 40 tons/yr) would preclude PSD review for NO_X as stated in the application. However, analysis of load factors for UF's boilers Nos. 3 and 5 (capacity over 100 MMBtu/hr) during the three year period '88 - '90 reveals the following:

	Fuel MM ft^3 per yr./Operating hrs per yr.		
	'88	'89	'90
No. 3	464.1/4451.6	392.4/5057.2	248.4/2648.1
No. 5	537.8/6411	403.2/4549.9	416.8/5115.6

Dividing the fuel rates by the operating hours gives the following (assume approximately 1,000 Btu required per pound of steam and 946 Btu per ft^3):

Avg. ft^3/hr. (000) / Avg. lbs. Steam per hr. (000)

	'88	'89	'90
No. 3	104.3/98.7	77.6/73.4	93.8/88.7
No. 5	83.9/79.4	88.6/83.8	81.5/77.1

Average load factors are obtained by dividing the steam production by the maximum capacity of 120,000 lbs/hr. The load reduction coefficient is then obtained from AP-42, Figure 1.4-1:

Avg. % Load/Load Reduction Coefficient

	'88	'89	'90
No. 3	82/.65	61/.47	74/.60
No. 5	66/.50	70/.55	64/.49

NO_X emission factors are then obtained by multiplying the load reduction coefficients by the 100% load factor, i.e. 550:

NO_X Emission Factor (lbs/MM ft^3 fuel)

	'88	'89	'90
No. 3	358	259	330
No. 5	275	303	270

A weighted average emission factor for the 3 yr. period can be based on relative operating hours as follows:

Fraction of Total hrs/Emission Factor

	'88	'89	'90	Total
No. 3	.37/132.5	.42/108.8	.21/69.3	310.6
No. 5	.40/110	.28/84.8	.32/86.4	281.2

Thus the NO_X emission credits would be approximately 155 tons/yr instead of the 195.1 tons/yr claimed, resulting in a net increase of about 79 tons/yr instead of 38.8 tons/yr. Due to the above, the application will have to be revised to include PSD review for NOx.

2. References in the application to the proposed facility being major on the basis of emissions exceeding 250 tons per year should be changed to 100 tons per year since the HRSG is on the "List of 28" major source categories (fossil fuel boiler exceeding 250 MMBtu/hr input including GT exhaust).

3. Page 2 of Form 1.202(1), Item C., implies "low NO_X combustors" are being proposed which is not the case. The revised application should explain that Low-NO_X combustors are not currently available for this model turbine but may be within 5 years. The revision should explain what is required in the initial design to provide for future installation of Low-NO_X burners.

4. Emission calculations are not adequately shown in Appendix A. All calculations affecting emissions should be shown in their entirety. For example, the Appendix "A" calculation for the NSPS NO_X emission limit of 75 ppm corrected to 15 percent oxygen is not carried to completion. The set-up is shown, but not the final calculation. The application should clearly show how all emission-related quantities were obtained.

5. Total steam production should be shown in Table 1-1 along with design capacity of the HRSG.

6. Please evaluate the impact of this project on the following Class I areas: Chassahowitzka National Wilderness Area in Florida and Okefenokee National Wilderness Area in Georgia. This evaluation should include a cumulative PM_{10} and NO_X Class I increment analysis. An expanded air quality related values analysis (AQRV) should be done since there are no significant impact levels for this analysis. The AQRV analysis includes impacts to soils, vegetation and wildlife.

7. Please explain the use of terrain elevations at receptor points in the modeling and show how the elevations input into the model were derived.

If further clarification is needed on any of the above, please contact John Reynolds or Cleve Holladay at (904) 488-1344.

Sincerely,

FOR
C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/JR/plm

c: A. Kutyna, NED
K. Kosky, P.E., KBN
D. Jones, P.E., FPC
J. Harper, EPA
C. Shaver, NPS

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 17, 1992

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. L. D. Riley, Jr.
Environmental Superintendent
Stone Container Corporation
1 Everitt Avenue
Post Office Box 2560
Panama City, Florida 32402

Dear Mr. Riley:

Re: Amendment to Construction Permit-Expiration Date Extension
AC 03-190964: No. 4 Bark Boiler

The Department has reviewed the above request contained in Mr. Michael H. Wheeler's letter received July 1, 1992, by the Department's Northwest District. The request is acceptable and the following will be changed and added:

1. Expiration Date
   From: June 30, 1992
   To: December 31, 1992

2. Attachments to be Incorporated
   - o Mr. Michael H. Wheeler's letter received July 1, 1992, by the Department's Northwest District.
   - o Mr. Ed K. Middleswart's letter dated July 6, 1992.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the amendment applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit Amendment File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and,

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the request/application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

This letter must be attached to the construction permit, No. AC 03-190964, and shall become a part of the permit.

Sincerely,

Howard L. Rhodes, P.E.
Interim Director
Division of Air Resources Management

HLR/RBM/rbm

Attachments

cc: M. Wheeler, P.E., SCC
P. Comer, Esq., DER
E. Middleswart, NWD
W. Congdon, Esq., DER

Florida Department of Environmental Regulation

Northwest District • 160 Governmental Center • Pensacola, Florida 32501-5794

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 6, 1992

Michael H. Wheeler, P.E.
Acting Environmental Supervisor
Stone Container Corporation
Panama City Mill
Post Office Box 2560
Panama City, Florida 32402

Dear Mr. Wheeler:

This is in response to your letter dated June 30, 1992, requesting an extension of expiration for permit AC03-190964. Your permit is being processed by our Bureau of Air Regulation in Tallahassee. We have forwarded your request to that office.

If you have any questions or comments, please contact Preston Lewis at (904) 488-1344.

Sincerely,

Ed K. Middleswart, P.E.
Program Administrator
Air Resources Management

EKM:aac

cc: Clair Fancy
Preston Lewis
Bob Kriegel

Stone Container Corporation

Container Board and Paper Division

June 30, 1992

Mr. Ed Middleswart, Air Programs Supervisor
Florida Department of Environmental Regulation
160 Governmental Center
Pensacola, Florida 32501-5794

Re: DER Permit #AC03-190964
Expiration Date: June 30, 1992

Dear Mr. Middleswart:

Pursuant to our conversation on this date, we would like to request a time extension of thirty days to meet the requirements of SPECIFIC CONDITION No. 24 of the above referenced permit. That condition requires that we submit on application for an operating permit.

The necessity of this request is based on the recent absence of L.D. Riley, Jr., our Environmental Superintendent, who has been ill.

Furthermore, we have recently completed construction of the modifications to No. 4 Bark Boiler as required by SPECIFIC CONDITION No. 6 and at this time are currently operating the facility in full accordance with all the general and specific conditions of the permit.

If you have any questions or desire any additional information please feel free to contact me at (904)785-4311, ext 359.

Sincerely yours,

Michael H. Wheeler, PE
Project Engineer
(Acting Env. Supt.)

/smj

cc: Jack Prescott
Chuck Bogatie
Dave Riley

Florida Department of Environmental Regulation

Northwest District • 160 Governmental Center • Pensacola, Florida 32501-5794

Lawton Chiles, Governor — Carol M. Browner, Secretary

July 6, 1992

OK OK
GPC - JKP
7/15 - 7/15/92

Michael H. Wheeler, P.E.
Acting Environmental Supervisor
Stone Container Corporation
Panama City Mill
Post Office Box 2560
Panama City, Florida 32402

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Sincerely,

Ed K. Middleswart

Ed K. Middleswart, P.E.
Program Administrator
Air Resources Management

EKM:aac

cc: Clair Fancy
Preston Lewis
Bob Kriegel

7-15-92
@ 9:30 am
Left a phone message for Mike Wheeler on the processing fee requirement. RBB

Stone Container Corporation

Containerboard and Paper Division

Pensacola, Florida 32402

June 30, 1992

Mr. Ed Middleswart, Air Programs Supervisor
Florida Department of Environmental Regulation
160 Governmental Center
Pensacola, Florida 32501-5794

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Sincerely yours,

Michael H. Wheeler

Michael H. Wheeler, PE
Project Engineer
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/smj

cc: Jack Prescott
Chuck Bogatie
Dave Riley